EXHIBIT 19

Why Fuel Quality Standards are Important

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STI Webinar – "Petroleum Storage Tank Maintenance"

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Agenda

- Consensus Organizations Set Fuel Standards
- Fuel Standards Generally Ensure Good Fuel Quality:
  - Some Exceptions – “What’s Not in the Specs”
- Fuel Standards Ensure Fuel is Safe, Legal and Fit for Use
  - Some Exceptions to Fit for Use -- Contaminants, etc.
- Biofuel Challenges
- Good Fuel Housekeeping/Workmanship
- Fuel Additive Basics – Where Are They Applied & Are They Really Needed?
- Where Fuel Specs Apply
- Fuel Standards Need to be Living Documents:
  - Must change as Engine Technology Improves

Consensus Organizations Set Fuel Standards

- Organizations like ASTM International (formerly American Society of Testing Materials) set fuel specs:
- Usually have equal number of interest groups on committees (e.g. 100 Producers, 100 Users)
- Members work together to produce Fuel Specifications such as ASTM D975 (diesel fuel) and ASTM D4814 (gasoline)
- Standard Test Methods (STM's) ensure that samples are tested for properties in the same way (D2068 STM for Determining Filter Blocking Tendency);
- A majority has to agree on proposals for new or improved specifications or STM's, though all concerns or disagreements are heard and thoroughly discussed. It can take a long time (sometimes years) to reach consensus!
- Other Fuel Standard Setting Organizations Exist Globally (e.g. ISO, BSI, etc.) whose specifications may differ from ASTM

Global Fuel Specs Differ

ASTM D975 vs. EN 590 #2 Diesel Fuel		
Key Property Differences		
	US	EU
Property	ASTM D975	EN 590
Cetane number, min.	40	51
Sulfur content, ppm (µg/g) or mg/kg	15	10
Conductivity, pS/m or CU min.	25	none
Water content, % vol, max and mg/kg	0.05*	200
Total contamination, mg/kg max.	none	24
Copper strip corrosion (3 hours at 50 °C), rating	3	1
Oxidation Stability @ 95°C for 16 hr, g/m^3, max.	none	25
Rancimat Oxidation Stability, 110°C, min. hrs.	none	20
Lubricity, wear scar diameter, µm, max. at 60 °C	520	460
Fatty acid methyl ester content, vol.%	5	7

* Total Water & Sediment

Fuel Standards Ensure Good Fuel Quality

- Having consensus agreement guarantees (mostly) that acceptable fuel is produced for the consumer
- Emissions regulations drive engine technology improvements which dictate needed fuel properties (sometimes changing fuel specs):
  - Diesel sulfur lowered from 500 to 15 ppm S in 2006
    - Much lower sulfur causes fuel to be less lubricious – lubricity specification needed. ASTM enacted fuel lubricity requirement.
  - High Pressure Common Rail (HPCR) diesel engines require cleaner, stable fuel (like “pressure cookers for fuel”)

Fuel Standards Ensure Good Fuel Quality

- Producing new, cleaner burning, lower emissions fuels doesn't always guarantee suitability for today's ultra sensitive and highly efficient engine systems.
- Changing to ULSD (Ultra Low Sulfur Diesel) significantly changed fuel's componentry – generally lessening the fuel's solvency:
  - Had a significant impact on solids formation
  - Peroxide formation is more of a problem
  - Wax precursors and solids propagators more pronounced
- What does all this mean? Generally, there may be more particulate and sediment in ULSD compared to LSD

ULSD Changes – Impact On Water & Biological Problems

	Changes in ULSD		Impact on Microbial Growth
↓	**Sulfur reduction 500 to <15 ppm**	↑	**Sulfur antagonistic to microbial growth***
↓	**Aromatic and phenolic compounds**	↑	**Aromatic and phenolic compounds are good growth inhibitors**
↑	**Saturates**	↑	**Saturates preferred food source compared to aromatics**
↑	**Water (free, non-dissolved)**	↑	**Free water availability increases**

*some debate about this

Fuel Specifications Mostly Ensure Good Fuel Quality – What's Not in the Specs

- Lack of improved fuel specs may not adequately address water and contaminants that may lead to fuel storage, dispensing, and vehicle engine problems:
  - No real water spec – BS&W (Bottoms, Sediment & Water) spec (500 ppm) not stringent enough;
  - Too much water is bad and can lead to increased bug problems, corrosion – also holds contaminants that lead to engine filter/injector deposits
  - NACE corrosion – typically only measured at refinery – tends to degrade as fuel moves downstream – usually unknown at end user;
  - Particulate/sediment – no real gravimetric or particle size distribution requirement (other than BS&W). OEM's prefer low PSD for HPCR.

Fuel Specifications – Fuel Must Be "Fit for Use"

- D975 and D4814 "specs" are minimums – and may on occasion be insufficient for good performance;
- All fuel tends to degrade in storage (this is normal) – degradation causes some fuel contaminants. Use of stability additive slows the degradation process;
- Water is fuel's enemy and must be managed – it carries contaminants that can lead to bug problems and corrosion; fuel filter and injector deposit issues.
- Both gasoline and diesel fuel must be safe to use, meet legal specifications and be "fit for use"

Biofuels – New Challenges to Good Fuel Quality

The inclusion of biofuels -- both ethanol in gasoline and biodiesel in diesel fuel has generally been good for the industry:

- Lessens US demand on foreign oil
- Supports US farmers
- Mostly enhances blended fuel properties:
  - Biodiesel – higher cetane, lubricity, generally improves emissions
  - Ethanol – increased octane, substitutes hazardous lead and MTBE, generally improves emissions

With the addition of bio components comes new challenges with water management and increased filter change-outs though:

- Biodiesel holds more water;
- Too much water in ethanol blends can lead to phase separation.
- Both bio components can have a tank cleaning effect.

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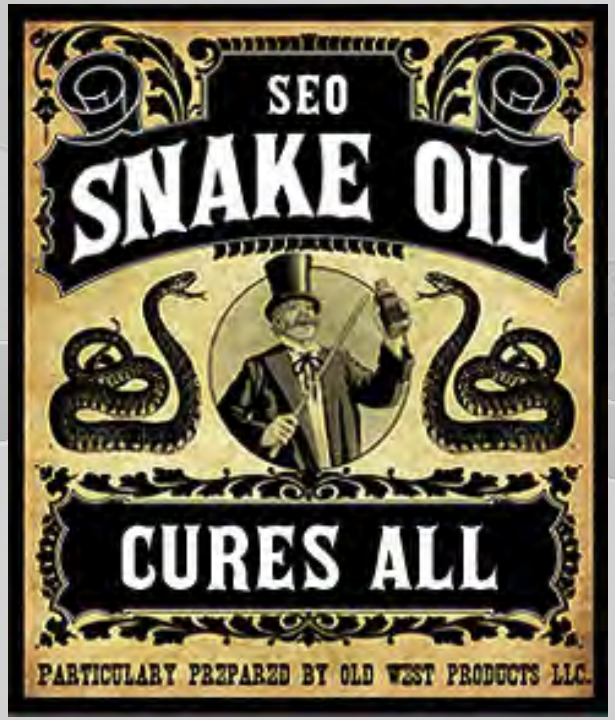
Good Fuel Housekeeping & Workmanship -- Leads to Good Fuel Quality

Simple steps can lead to improved fuel quality:

- Manage water -- remove tank bottoms routinely
- Keep water out of biofuels, especially ethanol blends
- Routine Fuel Sample Testing:
  - Bug testing – prevents biological growth, helps control downstream problems;
    - Proper biocide addition kills bugs and prevents corrosive acids from forming;
  - Corrosion testing -- protection diminishes as fuel travels downstream;
- Consider use of anti-foulant additive to prevent filter and injector plugging

Fuel Additive Perception



Reasons for Using Fuel Additives

- Fuel quality varies widely but can be improved through additive use:
  - Brings fuel into specification (low cetane, etc.)
  - Corrects deficiencies (poor storage stability, etc.)
  - Safety concerns (conductivity, etc.)
  - Asset protection (corrosion inhibitors, etc.)
    - Poor lubricity, biological degradation/corrosion, etc.
  - HPFI engine deposit problems (stabilizers, detergents, etc.)
- Unfortunately, diesel fuel is generally made to minimum ASTM D975 specifications and may occasionally not be fit for use – additives can help bridge this gap.

Fuel Additives – Are They Necessary?

Gasoline and diesel fuel contain many additives essential for good fuel quality and necessary for good fuel stability and performance:

- Stability additives -- prolongs fuel life, limits oxidation/degradation and metal interaction reactions;
- Corrosion inhibitors -- protects metal in fuel systems;
- Conductivity improvers – lessens static electricity, prevents fires/explosions;
- Lubricity improvers – provides needed lubrication in diesel injection systems;
- Biocides – preventive use minimizes bugs which may lead to corrosion;
- Anti-foulant additives – counteract fuel degradation & contaminant inter-actions that lead to filter/injector plugging

Where Are Fuel Additives Applied?

	Refinery	*Pipeline /Terminal*	*Fleet/Distributor/ Jobbers/Aftermarket/ End User*
Biocides	●	●	●
Cetane Improvers	●	●	●
Cold Flow Improvers	●	●	●
Conductivity Improver		●	
Corrosion Inhibitors	●	●	●
Gasoline/Diesel Detergents		●	●
De-icers		●	●
Stabilizers/Dispersants	●	●	●
Lubricity Improvers		●	●
Marker Dyes		●	●
Demulsifiers and Dehazers		●	●
Metal Deactivators	●		●

Where Fuel Specs Apply

Most ASTM fuel motor fuel (gasoline and diesel) specs apply at the point of manufacture – refineries generally have to meet pipeline or exchange partner specs:

- NACE corrosion spec of B+ or better for pipelines;
- Most other specs listed in D975 or D4814 tables;
  - Flash point, distillation, sulfur, etc.
- Some specs apply at terminals or as delivered to end users
  - lubricity, conductivity
- There is growing belief that all specs should apply at the end user level.

Fuel Specifications Need to be Living Documents

- Significantly lowering sulfur content of both gasoline and diesel fuel along with inclusion of fuel ethanol and biodiesel highlight the need for improved fuel specs:
  - Many of today's specs were set for older engine technologies;
    - Standard octane/cetane test engines are single cylinder with 50+ year old technology;
    - Stability tests such as D525, D2274, D6468 may no longer be applicable
  - New engine technologies (like diesel HPCR – High Pressure Common Rail) demand almost particulate and water-free, stable fuel;
  - Good fuel corrosion from the refinery to the end user would likely lessen distribution system and vehicle corrosion problems
- ASTM and other fuel standard setting bodies will continue to work towards making fuel specifications better,
  - Concerned parties should get involved and voice their concerns!

Questions?